

IN THE CLAIMS

Please cancel claims 6 through 9 and 16 through 29.

Please add the following new claims.

C
-- 30. A recombinant plasmid wherein a DNA which codes
~~at least~~ for the amino acid sequence:

+220x
B
Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser
Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg
Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg
Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu
Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile
Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser
Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val
Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu
Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys
Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser
His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr
Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn

is inserted in a vector DNA.

31.4 The recombinant plasmid according to claim 30
 wherein said inserted DNA comprises ~~at least~~ the following base
 pair sequence:

1230X
 E
 B' cont.)

ATG	ACC	AAC	AAG	TGT	CTC	CTC	CAA	ATT	GCT	CTC	CTG	TTG	TGC	TTC	TCC
TAC	TGG	TTG	TTC	ACA	GAG	GAG	GTT	TAA	CGA	GAG	GAC	AAC	ACG	AAG	AGG
ACT	ACA	GCT	CTT	TCC	ATG	AGC	TAC	AAC	TTG	CTT	GGA	TTC	CTA	CAA	AGA
TGA	TGT	CGA	GAA	AGG	TAC	TCG	ATG	TTG	AAC	GAA	CCT	AAG	CAT	GTT	TCT
AGC	AGC	AAT	TTT	CAG	TGT	CAG	AAG	CTC	CTG	TGG	CAA	TTG	AAT	GGG	AGG
TCG	TCG	TTA	AAA	GTC	ACA	GTC	TTC	GAG	GAC	ACC	GTT	AAC	TTA	CCC	TCC
CTT	GAA	TAT	TGC	CTC	AAG	GAC	AGG	ATG	AAC	TTT	GAC	ATC	CCT	GAG	GAG
GAA	CTT	ATA	ACG	GAG	TTC	CTG	TCC	TAC	TTG	AAA	CTG	TAG	GGA	CTC	CTC
ATT	AAG	CAG	CTG	CAG	CAG	TTC	CAG	AAG	GAG	GAC	GCC	GCA	TTG	ACC	ATC
TAA	TTC	GTC	GAC	GTC	GTC	AAG	GTC	TTC	CTC	CTG	CGG	CGT	AAC	TGG	TAG
TAT	GAG	ATG	CTC	CAG	AAC	ATC	TTT	GCT	ATT	TTC	AGA	CAA	GAT	TCA	TCT
ATA	CTC	TAC	GAG	GTC	TTG	TAG	AAA	CGA	TAA	AAG	TCT	GTT	CTA	AGT	AGA
AGC	ACT	GGC	TGG	AAT	GAG	ACT	ATT	GTT	GAG	AAC	CTC	CTG	GCT	AAT	GTC
TCG	TGA	CCG	ACC	TTA	CTC	TGA	TAA	CAA	CTC	TTG	GAG	GAC	CGA	TTA	CAG
TAT	CAT	CAG	ATA	AAC	CAT	CTG	AAG	ACA	GTC	CTG	GAA	GAA	AAA	CTG	GAG
ATA	GTA	GTC	TAT	TTG	GTA	GAC	TTC	TGT	CAG	GAC	CTT	CTT	TTT	GAC	CTC
AAA	GAA	GAT	TTC	ACC	AGG	GGA	AAA	CTC	ATG	AGC	AGT	CTG	CAC	CTG	AAA
TTT	CTT	CTA	AAG	TGG	TCC	CCT	TTT	GAG	TAC	TCG	TCA	GAC	GTG	GAC	TTT
AGA	TAT	TAT	GGG	AGG	ATT	CTG	CAT	TAC	CTG	AAG	GCC	AAG	GAG	TAC	AGT
TCT	ATA	ATA	CCC	TCC	TAA	GAC	GTA	ATG	GAC	TTC	CGG	TTC	CTC	ATG	TCA
CAC	TGT	GCC	TGG	ACC	ATA	GTC	AGA	GTG	GAA	ATC	CTA	AGG	AAC	TTT	TAC
GTG	ACA	CGG	ACC	TGG	TAT	CAG	TCT	CAC	CTT	TAG	GAT	TCC	TTG	AAA	ATG
TTC	ATT	AAC	AGA	CTT	ACA	GGT	TAC	CTC	CGA	AAC					
AAG	TAA	TTG	TCT	GAA	TGT	CCA	ATG	GAG	GCT	TTG					

32.9

C
C A recombinant plasmid wherein a DNA which codes ~~at~~
~~least~~ for the amino acid sequence:

T246X
B' (cont.)
C
Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser ^{His} ~~His~~ Cys Ala Trp Thr
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
Thr Gly Tyr Leu Arg Asn

is inserted in a vector DNA.

²
33. The recombinant plasmid according to claim ⁹32 wherein
said inserted DNA comprises ~~at least~~ the following base pair sequence:

T250X
(cont.)
ATG AGC TAC AAC TTG CTT GGA TTC CTA CAA AGA AGC AGC AAT TTT CAG
TAC TCG ATG TTG AAC GAA CCT AAG GAT GTT TCT TCG TCG TTA AAA GTC
TGT CAG AAG CTC CTG TGG CAA TTG AAT GGG AGG CTT GAA TAT TGC CTC
ACA GTC TTC GAG GAC ACC GTT AAC TTA CCC TCC GAA CTT ATA ACG GAG
AAG GAC AGG ATG AAC TTT GAC ATC CCT GAG GAG ATT AAG CAG CTG CAG
TTC CTG TCC TAC TTG AAA CTG TAG GGA CTC CTC TAA TTC GTC GAC GTC
CAG TTC CAG AAG GAG GAC GCC GCA TTG ACC ATC TAT GAG ATG CTC CAG
GTC AAG GTC TTC CTC CTG CGG CGT AAC TGG TAG ATA CTC TAC GAG GTC
AAC ATC TTT GCT ATT TTC AGA CAA GAT TCA TCT AGC ACT GGC TGG AAT
TTG TAG AAA CGA TAA AAG TCT GTT CTA AGT AGA TCG TGA CCG ACC TTA
GAG ACT ATT GTT GAG AAC CTC CTG GCT AAT GTC TAT CAT CAG ATA AAC
CTC TGA TAA CAA CTC TTG GAG GAC CGA TTA CAG ATA GTA GTC TAT TTG
CAT CTG AAG ACA GTC CTG GAA GAA AAA CTG GAG AAA GAA GAT TTC ACC
GTA GAC TTC TGT CAG GAC CTT CTT TTT GAC CTC TTT CTT CTA AAG TGG
AGG GGA AAA CTC ATG AGC AGT CTG CAC CTG AAA AGA TAT TAT GGG AGG
TCC CCT TTT GAG TAC TCG TCA GAC GTG GAC TTT TCT ATA ATA CCC TCC
ATT CTG CAT TAC CTG AAG GCC AAG GAG TAC AGT CAC TGT GCC TGG ACC
TAA GAC GTA ATG GAC TTC CGG TTC CTC ATG TCA GTG ACA CGG ACC TGG
ATA GTC AGA GTG GAA ATC CTA AGG AAC TTT TAC TTC ATT AAC AGA CTT
TAT CAG TCT CAC CTT TAG GAT TCC TTG AAA ATG AAG TAA TTG TCT GAA
ACA GGT TAC CTC CGA AAC
TGT CCA ATG GAG GCT TTG

⁵
34. The recombinant plasmid according to claim ¹¹30 wherein
said vector DNA is an Escherichia coli plasmid.

¹³
35. The recombinant plasmid according to claim ⁹32 wherein
said vector DNA is an Escherichia coli plasmid.

36. The recombinant plasmid according to claim 34⁵ wherein said Escherichia coli plasmid is selected from the group consisting of pBR 322, pCR1^{and} pMB9 ~~and pSC1~~.

37. The recombinant plasmid according to claim 35¹³ wherein said Escherichia coli plasmid is selected from the group consisting of pBR322, pCR1^{and} pMB9 ~~and pSC1~~.

38. A process for preparing a recombinant plasmid which comprises inserting a synthesized double stranded DNA which codes for ~~at least~~ the amino acid sequence:

T260X Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser
Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg
Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg
Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu
Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile
Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser
Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val
Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu
Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys
Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser
His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr
Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn

in a vector DNA.

¹⁸
38. A process for preparing a recombinant plasmid which comprises inserting a synthesized double stranded DNA which codes for ~~at least~~ the amino acid sequence:

T270X
Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser Ais Cys Ala Trp Thr
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
Thr Gly Tyr Leu Arg Asn

(B' cont.)
in a vector DNA.

^{40/14} 40. The process according to claim ^{38/15} 38 wherein said vector DNA is an Escherichia coli plasmid.

^{41/17} 41. The process according to claim ^{39/18} 39 wherein said vector DNA is an Escherichia coli plasmid.

^{42/17} 42. A process according to claim ^{40/16} 40 wherein said Escherichia coli plasmid is selected from the group consisting of pBR322, pCR1 ^{and} pMB9 ~~and pSC1~~.

²⁰
43. A process according to claim ¹⁹41 wherein said Escherichia coli plasmid is selected from the group consisting of pBR322, ~~pCR1~~ ^{and} ~~pMB9 and pSC1~~.

²¹
44. A process for producing a microorganism capable of expression of a polypeptide with interferon activity which comprises transforming a host microorganism with a replicable recombinant plasmid containing a foreign DNA which codes ~~at least~~ for the amino acid sequence:

7280X Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser
Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg
Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg
Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu
Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile
Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser
Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val
Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu
Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys
Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser
His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr
Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn.

²⁴
45. A process for producing a microorganism capable of expression of a polypeptide with interferon activity which comprises transforming a host microorganism with a replicable recombinant plasmid containing a foreign DNA which codes ~~at least~~ for the amino acid sequence:

Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser ^{His} ~~His~~ Cys Ala Trp Thr
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
Thr Gly Tyr Leu Arg Asn.

²²
~~46.~~ A process according to claim ~~44~~ ²¹ wherein said host microorganism is Escherichia coli χ 1776.

²⁵
~~47.~~ A process according to claim ~~45~~ ²⁴ wherein said host microorganism is Escherichia coli χ 1776.

²³
~~48.~~ A process according to claim ~~44~~ ²¹ wherein said recombinant plasmid is TpIF 319-13. --

Claim 11, line 2, change "6" to -- 30 --.

Claim 12, line 2, change "7" to -- 32 --.